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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/442,095

11/17/1999

CHONG-SAM CHUNG

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21171

7590

02/16/2005

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/442,095	Applicant(s) CHUNG ET AL.	
	Examiner Aristotelis M Psitos	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-17 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/04; 3/3/04; 2/5/04</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/04 has been entered.

Information Disclosure Statement

The IDS of 7/8/04 has been reviewed to the extent discussed by applicants and that communication.

The IDS of 3/3/04 has been reviewed. Because this appears to be a duplicate of the IDS submitted on 2/27/04 it has not been further reviewed. Note the identification of such as a duplicate of the previously note 2/27/04 IDS.

The IDS of 2/27/04 has been reviewed and made of record.

The IDS of 4/24/02 has been previously reviewed as indicated during the prosecution of the application.

Claims 1-17 and 20 are pending in this application. Claims 18-19 have been canceled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 2, 3, 6, 13, 15, 16, and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Chinese patent 97-113095.7A (12/17/97) or alternatively under 103 (a) further in view of JP 10-134394.

The following analysis is made in accordance with the submitted English translation of the Chinese Office action. It is noted that this OA is after the filing date of the application and hence has not been made of record since it is NOT prior art.

Claim 1:	Chinese 97-113095.7
An optical pickup comprising:	From the analysis this is such a
	device
a first laser beam source generating a first	either of the laser sources,
laser beam;	laser diode 130 in the submitted
	OA

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a second laser beam source generated

the other of the laser sources,

a second laser beam having a different

laser diode 140

wavelength than the first laser beam;

an optical system projecting the first and

optical elements depicted

second laser beams to a signal layer of an

see the report, at least element 170

optical disk and transmitting the first and

recording plane 185 in report

second laser beams as reflected from the signal layer,

an optical detector detecting the first and second laser

detector 190 in the report

beams transmitted from the optical system,

the optical detector being optimized with respect to

the second laser beam;

and

an optical converter converting the first laser beam

either inherently present, or

transmitted from the optical system

alternatively obvious - see

into the laser beam detectable by the optical detector.

below.

As analyzed/reported in the submitted Chinese report, the above noted Chinese document provides for the elements as identified. The examiner is endeavoring to obtain an English translation of the Chinese documents for applicants' representatives' benefit and subsequently send such.

The claim requires two critical features:

a) that the laser beams are reflected by a single signal layer,

b) the converter is optimized with respect to the second beam.

As noted in the Chinese report, there is a single recording plane 185 and hence item a is met.

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As noted in the Chinese report, the position taken, and herein presented as the examiner's is inherently present because the optical detector detects both of the reflected light beams as necessary. Hence in order for such reflected beams to be detected, it is "optimized". Alternatively, under 103 considerations, if applicants' can convince the examiner that such is not inherently present, then the examiner relies upon JP 10-134394 – note the MAT (machine assisted translation) of the JP document in paragraphs 28-37 which discusses the % noted in figure 2 a & b of the reflected light.

It would have been obvious to modify the base system of JP 10-134394 so as to "optimize" the overall parameters of the optical system prior to detection by the photodetector to insure proper detection of the required signals.

With respect to claim 2, the lasers are interpreted as laser diodes.

With respect to claim 6, the examiner interprets the photodetector as a photodiode.

With respect to claim 20, the above analysis with respect to claim 1 is repeated.

With respect to claim 13, this follows claim 1 but includes

- a) driving section moving the optical pickup ...
- b) a signal processing section
- c) a controlling section for controlling ...

With respect to these elements, the examiner concludes that these system elements are inherently present in the above primary Chinese reference, i.e., else there would be no ability to move the pu in any direction over the record medium, no ability to process the detected signals, and finally no ability to permit correction of errors. Alternatively, if applicants can convince the examiner that such elements are not inherently present in the above Chinese system, the applicants' attention is further drawn to the MAT of the above noted JP document 10-134394, paragraphs 30-54 wherein the tracking/focusing controls are depicted and hence at the very least such elements are met.

With respect to claim 14, the lasers are interpreted as laser diodes.

With respect to claim 16, the detecting means is interpreted as a photodiode.

With respect to claim 3, the following analysis is made:

Claim 3

Chinese document: 97-113095.7A

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The optical pickup as claimed in claim 1,
wherein the optical system comprises:

a first collimating lens diverging the first
laser beam at a predetermined angle that
permits a fracture surface aberration of the
first laser beam to fall below a predetermined
value when the first laser beam generated
from the first laser beam source is collected
on the signal layer of the optical disk;

the first collimating element
is depicted.

The examiner interprets the aberration
limitation to be inherently present.

a second collimating lens converting the
second laser beam generated from the second
laser beam source into a parallel ray;

the second collimating element is present.

a prism reflecting the laser beams
transmitted through the first and second collimating
lenses toward the optical disk, while transmitting
the laser beams reflected from the signal layer
of the optical disk;

The prism is depicted and hence met.

an objective lens collecting the laser beams
reflected from the prism onto the signal layer
of the optical disk; and

the objective lens is present

a light receiving lens collecting the laser

the light receiving lens is present.

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beam reflected from the signal layer of the optical disk on the optical detector in the form of an optical spot of a predetermined size.

As analyzed above, the physical elements are considered met. With respect to the functional requirement of the first collimating lens, this function is considered inherently present because the optical element (objective lens) provides for an appropriate aberration of the light beam onto the recording surface. The examiner concludes that the description merely describes the inherent condition.

Claim Rejections - 35 USC § 102

2. Claims 1,2, 13, 14, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-134394

The following analysis is made.

Claim 1:	JP 10-134394
An optical pickup comprising:	From the title & abstract
a first laser beam source generating a first laser beam;	laser source 1 see paragraphs 21-24
a second laser beam source generated	laser source 6, see paragraphs
a second laser beam having a different wavelength than the first laser beam;	27-30
an optical system projecting the first and second laser beams to a signal layer of an optical disk and transmitting the first and second laser beams as reflected from the signal layer,	optical elements depicted 3,4, and 9 see paragraphs 21-33
an optical detector detecting the first and second laser beams transmitted from the optical system,	detector 13, see description in paragraphs 33-53

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the optical detector being optimized with respect to
the second laser beam;

and

an optical converter converting the first laser beam elements 9,11,12
transmitted from the optical system see description of these
into the laser beam detectable by the optical detector. elements.

As analyzed above, the claimed elements are met by the above structure.

With respect to the single signal recording surface, and the reflection of the light beams therefrom,
applicants' attention is drawn to the MAT paragraphs 24-29.

With respect to the convention ability, such is considered met with the above elements 9,11 and
12 – see the discussion with respect to these elements as found in paragraphs 23,23,25.

With respect to claim 2, the lasers are diodes.

With respect to claim 13, see the discussion at paragraphs 24-41. The examiner concludes that
these paragraphs depict/disclose the processing of the returned signals for subsequent control of the
position of the optical system, i.e., the intended use of FE and TE signals, and hence claim 13 is met.

With respect to claim 14, see the above analysis of claim 2.

With respect to claim 20, see the above analysis of claim 1.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim
3 above in paragraph 1 and further in view of Mizuno.

With respect to claim 4, the wavelengths are not clearly depicted in the base reference (this might
change after receiving an English translation of such a document).

Nevertheless, the range of wavelengths is taught by the Mizuno reference, see the description of
the appropriate wavelengths for the s and p polarization.

It would have been obvious to modify the base system as discussed above with respect to claim
3 and modify such with the appropriate wavelength ranges, motivation is to use existing laser diodes and

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the wavelength ranges discusses so as to save valuable resources in time and practice in testing different wavelengths from those established.

4. Claims 7-11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1,2,6 and 20 above in paragraphs 1 and 2, and further in view of Kajiyama et al.

With respect to these claims, the ability of having a holographic element as the optical converter.

Kajiyama et al teaches in this environment the use of holographic elements as optical converters.

It would have been obvious to modify the base system as analyzed above in either paragraph 1 or 2 with the above teaching from Kajiyama et al, motivation is to further use alternative optical elements for the optical conversion properties in order to reduce the overall footprint of the final optical product.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese document 97-113095.7A further considered with Kajima et al.

The Chinese document is relied upon for the reasons stated above.

Claim 12 also includes the holographic lens for converting the laser beams into parallel rays.

Kajiyama et al teaches in this environment the use of holographic elements as optical converters.

It would have been obvious to modify the base system as analyzed above in paragraph 6 with the above teaching from Kajiyama et al, motivation is to further use alternative optical elements for the optical conversion properties in order to reduce the overall footprint of the final optical product.

6. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 13 as stated in paragraph 2 above, and further in view of Chinese document 97-113095.7A .

Claims 3 and 15 recite the additional collimating elements and single prism.

The base reference JP 10-134394 already provides for plural collimating elements for each laser source.

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The ability of having a single prism for reflecting light onto a record medium is taught by the Chinese document, see the prism element flanked by the appropriate laser sources.

It would have been obvious to modify the base system of JP 10-134394 with the above teaching from the Chinese document, motivation is to reduce the overall foot print of the optical device.

7. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 13 as stated in paragraph 2 above, and further in view of Ohsato.

Although it is not clearly depicted in the base reference that the photodetector is a photodiode the use of photodiodes as photodetectors is well established as taught by the Ohsato reference.

It would have been obvious to modify the base system as relied upon above in paragraph 2 with the teaching from Ohsato, motivation is to use established elements in this environment for their inherent ability and savings of time and effort in redesigning photodiodes as detectors.

Allowable Subject Matter

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the cited prior art clearly depicts the predetermined angle value and the representation as recited in claim 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653

A handwritten signature in black ink, appearing to be 'AMP', written over a horizontal line.

AMP